

BEST AVAILABLE COPY**REMARKS**

Claims 14-20 are cancelled, without prejudice, as being directed towards a previously non-elected invention. Claims 1-7 and 9 are amended. No new subject matter is present. Reconsideration and allowance of claims 1-13 is requested in light of the following remarks.

Claim Rejections – 35 U.S.C. § 102

Claims 1-2, 4-10 and 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,091,154 to Ohkawa ("Ohkawa"). The applicant disagrees.

Claim 1 is amended to recite that the word line patterns include a word line and a word line capping layer. This feature is fully supported by the original application at, e.g., FIG. 1 and page 4, lines 13-14.

Ohkawa does not teach that the alleged word line pattern 48 includes a word line and a word line capping layer. For this reason, Ohkawa fails to anticipate claim 1 because it does not show the identical invention in as complete detail as contained in the claim. MPEP 2131.

Claims 2 and 4-8 depend from claim 1, and inherently contain the features recited in claim 1. Consequently, Ohkawa fails to anticipate claims 2 and 4-8 because it does not show the identical invention in as complete detail as is inherently contained in the claim. MPEP 2131.

Furthermore, claim 2 is amended to recite that a maximum width of the word line spacers are substantially the same as a maximum width of the gate spacers. This feature is fully supported by the original application at, e.g., claim 2, claim 10, and FIG. 6.

Ohkawa FIG. 19C illustrates that a maximum width of the alleged word line spacers 60 in the memory cell portion is not substantially the same as a maximum width of the alleged gate spacers 60 in the peripheral circuit portion.

For this additional reason, Ohkawa fails to anticipate claim 2 because it fails to show the identical invention in as complete detail as contained in the claim. MPEP 2131.

Furthermore, claim 4 is amended to recite that the contact etch stop layer is disposed in contact with the word line spacers and the interlayer insulating layer in the cell array region, and is disposed in contact with the gate spacers and the interlayer insulating layer in the peripheral circuit region. This feature is fully supported by the original application at, e.g., FIGs. 5 and 6.

Ohkawa FIG. 19C does not illustrate that the alleged contact etch stop layer 62 is disposed in contact with the alleged word line spacers 60 and the alleged interlayer insulating layer 63 in the cell array region, nor does it illustrate that the alleged contact etch stop layer

BEST AVAILABLE COPY

62 is disposed in contact with the alleged gate spacers 60 and the alleged interlayer insulating layer 63 in the peripheral circuit region.

For this additional reason, Ohkawa fails to anticipate claims 4 because it fails to show the identical invention in as complete detail as contained in the claim. MPEP 2131.

Furthermore, claim 5 is amended to recite that the interlayer insulating layer is one selected from the group consisting of an HDP oxide layer, a USG layer, and a PSG layer. Contrary to this feature, it was recognized that Ohkawa teaches an interlayer insulating layer 63 of BPSG (column 23, lines 30-31).

For this additional reason, Ohkawa fails to anticipate claim 5 because it fails to show the identical invention in as complete detail as contained in the claim. MPEP 2131.

Furthermore, claim 6 is amended to recite that the lower contact hole has a first diameter and the upper contact hole has a second diameter that is unequal to the first diameter. This feature is fully supported by the original application at, e.g., claim 7 and FIG. 6.

Contrary to the features recited in claim 6, Ohkawa FIG. 19C illustrates a bit contact opening 64 that has a single diameter throughout (column 23, line 36). While it is alleged that Ohkawa FIG. 20C illustrates a self-aligned contact hole 51 having a lower contact hole of a first diameter and an upper contact hole of a second diameter, it must be remembered that claim 1 requires that there be a self-aligned contact spacer covering a sidewall of the self-aligned contact hole.

Ohkawa's FIG. 20C does not show that there is a self-aligned contact spacer covering a sidewall of the alleged self-aligned contact hole 51, where the edges of the silicon nitride film 49 (column 24, line 23) are apparently alleged to define the diameter of the recited lower contact hole. Alternatively, if the silicon nitride film 49 is alleged to be the recited self-aligned contact spacer of claim 1, then contrary to claim 6, Ohkawa's FIG. 20C illustrates that the diameter of the upper portion of the alleged self-aligned contact hole 51 is aligned with the sidewall of the alleged word line patterns 48.

In other words, the embodiment illustrated in Ohkawa's FIG. 19C fails to show the features recited in claim 6, and the embodiment illustrated in Ohkawa's FIG. 20C fails to show features that are inherently contained in claim 6. Furthermore, Ohkawa contains no suggestion that the embodiment of FIG. 19C and the embodiment of FIG. 20C can be combined to arrive at the features that are recited and inherently contained in claim 6.

For this additional reason, Ohkawa fails to anticipate claim 6 because it does not show the identical invention in as complete detail as contained in the claim. MPEP 2131.

BEST AVAILABLE COPY

Furthermore, claim 7 is amended for consistency with claim 6. Claim 7 depends from claim 6, and inherently contains the features recited in claim 6. Consequently, Ohkawa also fails to anticipate claim 7 for at least the same reasons stated above in regard to claim 6. MPEP 2131.

Claim 9 is amended to recite that the gate spacer is disposed entirely between a sidewall of the at least one gate pattern and the inter-insulation layer. This feature is fully supported by the original application at, e.g., FIG. 5 and FIG. 6.

Contrary to the above feature of claim 9, Ohkawa FIG. 19C illustrates that the alleged gate spacer 60 is not disposed entirely between a sidewall of the alleged at least one gate pattern 48 and the alleged interlayer insulating layer 63. Rather, a large portion of the alleged gate spacer 60 is disposed between an upper surface of the alleged at least one gate pattern 48 and the alleged interlayer insulating layer 63.

For the above reason, Ohkawa does not anticipate claim 9 because it fails to show the identical invention in as complete detail as contained in the claim. MPEP 2131.

Claims 10 and 12-13 depend from claim 9, and inherently contain the features of claim 9. Consequently, Ohkawa fails to anticipate claims 10 and 12-13 because it does not show the identical invention in as complete detail as is inherently contained in the claims. MPEP 2131.

Claim Rejections – 35 U.S.C. § 103

Claims 3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohkawa in view of U.S. Patent No. 5,817,562 to Chang, et al. ("Chang"). The applicant disagrees.

Claims 3 depends from claim 1 and inherently contain the features recited in claim 1. Consequently, claim 3 is allowable over the Ohkawa/Chang combination at least because it depends from a nonobvious independent claim. MPEP 2143.03.

Furthermore, claim 3 also depends from claim 2, and inherently contains the features recited in claim 2. As explained above, Ohkawa fails to teach word line spacers as recited in claim 2. Furthermore, Chang is not alleged to teach the word line spacers as recited in claim 2, nor does it. Consequently, the Ohkawa/Chang combination also fails to establish *prima facie* obviousness for claim 3 because it fails to teach or suggest all the features that are inherent to the claim. MPEP 2143.03.

Furthermore, claim 3 is amended to recite that the spacer etch stop layer is disposed in contact with the word line spacers and the word line patterns in the cell array region, disposed

in contact with the gate spacers and the at least one gate pattern in the peripheral circuit region, and disposed in contact with the self-aligned contact spacer and the word line patterns in the cell array region. This feature is fully supported by the original application at, e.g., claim 3, FIG. 5, and FIG. 6.

It was recognized that Ohkawa fails to teach the recited spacer etch stop layer, and contrary to features recited in claim 3, Chang FIG. 7 illustrates that the alleged spacer etch stop layer 24 is not disposed in contact with the alleged self-aligned contact spacer 30 and the word line patterns 16.

For the above reason, the Ohkawa/Chang also fails to establish *prima facie* obviousness for claim 3 because the combination does not teach or suggest all the features recited in the claim. MPEP 2143.03.

Claims 11 depends from claim 9 and inherently contain the features recited in claim 9. Chang is not alleged to teach the features of claim 9 that Ohkawa fails to teach, nor does it teach those features. Therefore, the Ohkawa/Chang combination fails to establish *prima facie* obviousness for claim 9, and claim 11 is allowable over the Ohkawa/Chang combination at least because it depends from a nonobvious independent claim. MPEP 2143.03.

Conclusion

For the above reasons, reconsideration and allowance of claims 1-13 is requested. Please telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

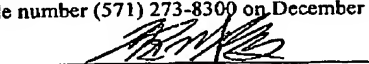
Respectfully submitted,

MARGER JOHNSON & McCOLLOM, P.C.


Todd J. Iverson
Reg. No. 53,057

MARGER JOHNSON & McCOLLOM, P.C.
210 SW Morrison Street, Suite 400
Portland, OR 97204
503-222-3613
Customer No. 20575

I hereby certify that this correspondence is being transmitted to the U.S. Patent and Trademark Office via facsimile number (571) 273-8300 on December 6, 2005.


Li Mei Vermilya